Demolition … Deconstruction … Environmentally-Responsible Waste Management … Responsible Brownfields Redevelopment

Common practice in preparing a site for redevelopment usually entails demolition of any on-site buildings or structures to clear the way for reuse of the land. If plans don't include restoration or rehabilitation of on-site structures, then deconstruction should be considered as the next step to address on-site structures before demolition. Building hierarchy – restore, preserve, adapt, deconstruct, demolish, demolish by neglect. Deconstruction can be an economically viable and environmentally friendly alternative to traditional demolition.

The benefits of deconstruction include cost savings, job creation and environmental preservation. Deconstruction may save as much as 30-50% when compared to traditional demolition costs. Labor costs for deconstruction are typically higher than for demolition. However, landfill disposal fees are lower. Combined cost savings exist with avoided disposal costs and recovered materials value. Because deconstruction is labor intensive, it can lead to the creation of jobs for the low-skilled workforce. Deconstruction helps preserve natural resources by offsetting the need for virgin materials consumption since materials are reentering the market for reuse or recycling.

Usually 70-80% of wastes can be diverted from the landfill with a deconstruction project. Salvaged materials can be reused, sold for recycling/remanufacture or donated. Construction and demolition debris account for 25-40% of landfill content. Demolition activities generate a wide variety of debris including wood, concrete, steel, brick, and gypsum. Many of these materials (if not contaminated) can be reused or recycled. Deconstruction and selective demolition methods divert large amounts of materials from the waste stream ultimately conserving limited landfill space. If time does not allow for complete deconstruction, items such as doors, light fixtures, windows, cabinets, etc. can be readily salvaged or "cherry picked."

The U.S. EPA supports and encourages the reuse and reduction of construction and demolition materials.

A good deconstruction project requires good planning. Identify knowledgeable and experienced demolition and salvage contractors. Identify markets for recycling, companies/non-profits for reusing materials or donation of materials.

Site redevelopment, building renovation and building material reuse can be and should be perceived as one connected industry.

In keeping with the principles of brownfields redevelopment and its reuse of previously developed land and existing infrastructure, deconstruction continues along this theme with reuse of formerly used materials. Please consider whether deconstruction techniques can be used to prepare your site for renovation or construction.

Resources …

U.S. Environmental Protection Agency, OSWER – Reducing Construction & Demolition Debris
www.epa.gov/epaoswer/non-hw/debris-new/reducing.htm

Recover Your Resources - Reduce, Reuse, and Recycle Construction and Demolition Materials at Land Revitalization Projects

http://www.epa.gov/epaoswer/non-hw/debris-new/pubs/brochure.pdf

Construction & Demolition Debris Recycling for Environmental Protection and Economic Development – Practice Guide #7, Southeast Regional Environmental Finance Center (Fall 2004)
http://cepm.louisville.edu/Pubs_WPapers/practiceguides/PG7.pdf

A Guide to Deconstruction, U.S. Department of Housing and Urban Development, NAHB Research Center, Inc. (February 2000)
http://www.huduser.org/Publications/PDF/decon.pdf

Deconstruction Institute
http://www.deconstructioninstitute.com/

Demolition and Salvage – A Guide for Developers & Renovators: Deconstructing Buildings for Salvage & Recycling
http://www.gvrd.bc.ca/recycling-and-garbage/pdfs/DemolitionSalvageGuide.pdf

Building Materials Reuse Association
http://www.buildingreuse.org/

Construction Materials Recycling Association (CMRA)

http://www.cdrecycling.org/index.html

Construction & Demolition Recycling – on-line magazine
http://www.cdrecycler.com/

Indiana Materials Xchange (IDEM) – www.IN.gov/recycle/imx

Also …

Dupont Abandoned Cable Recycling Service –
http://www.dupont.com/cablingsolutions/abandoned_cable/suite.html

Armstrong Ceiling Recycling Program – http://www.armstrong.com/commceilingsna/article22473.html

Carpet America Recovery Program - http://www.carpetrecovery.org/index.php

Kruse Carpet Recycling (Indianapolis) - http://www.krusecarpetrecycling.com/

Concrete Recycling - http://www.concreterecycling.org/

3rd Asphalt Shingle Recycling Forum - http://shinglerecycling.org/

Drywall Recycling - http://www.drywallrecycling.org/

Habitat for Humanity ReStores - http://www.habitat.org/env/restores.aspx

Site Highlight

Green Redevelopment in Ligonier: Former Essex Wire site (Brownfields Bulletin - July/August 2008)
Local example of "green" deconstruction and building material recycling.
..\Miscellaneous\Essex Wire Deconstruction (BB 8-08).pdf

Revised 8/27/08